

LIST OF CLAIMS / AMENDMENTS

Claims 38, 43-44, 59-66, and 70 were canceled previously.

Please amend claims 1-3, 6, 16, 26, 32, 35, 53, 67-68, and 71-73 as shown herein.

Claims 1-37, 39-42, 45-58, 67-69, and 71-73 are pending and are listed following:

1. (currently amended) A method comprising:

initiating an online gaming activity from a gaming system console with multiple users; and

authenticating the multiple users of the gaming console, the gaming system console, a game title, and an online service together in a single request/reply exchange with between an authentication entity and the gaming console.

2. (currently amended) A method as recited in claim 1, wherein the authenticating comprises:

submitting a request from the gaming system console to the authentication entity, the request containing identities of the multiple users, identification of the gaming system console, identification of the game title, and identification of the online service; and

returning a reply from the authentication entity to the gaming system console that can be used to authenticate the multiple users, the gaming system console, and the game title in the online gaming activity.

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2 **3. (currently amended)** A method as recited in claim 1, wherein
3 the authenticating comprises:

4 forming, at the gaming system console, a request containing an identity
5 string that includes a gaming system console identity, a game title identity,
6 multiple user identities, and an identity of an online service;

7 submitting the request from the gaming system console to the
8 authentication entity;

9 creating, at the authentication entity, a reply containing the identity string
10 and a session key K_{XA} to be used in communication between the gaming system
11 console and the online service, the reply being encrypted with a key associated
12 with the online service; and

13 returning the reply from the authentication entity to the gaming system
14 console.

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16 **4. (original)** A method as recited in claim 1, wherein the
17 authenticating comprises exchanging messages specified in the Kerberos protocol,
18 the response message containing a ticket having a authorization data field which
19 acknowledges that multiple identities have been authenticated.

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21 **5. (original)** One or more computer-readable media comprising
22 computer-executable instructions that, when executed, perform the method as
23 recited in claim 1.
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1 **6. (currently amended)** A method comprising:

2 submitting a single request from a game console to a ticket issuing entity,
3 the request containing a game console identity, multiple user identities identifying
4 multiple users of the game console, and an identity of an online service;

5 returning a ticket from the ticket issuing entity to the game console, the
6 ticket containing the game console identity and the multiple user identities
7 encrypted with a key associated with the online service;

8 passing the ticket from the game console to the online service; and

9 decrypting the ticket at the online service, wherein after the decrypting the
10 authenticity of the multiple users contained in the ticket is trusted.

11 **7. (previously presented)** A method as recited in claim 6, wherein

12 the single request further includes an identity of the game console, and the game
13 console identity is included in the issued ticket.

14 **8. (original)** A method as recited in claim 6, further comprising

15 sending some cryptographical information to prove knowledge of the user's key
16 while submitting the request.

17 **9. (original)** A method as recited in claim 6, wherein the ticket

18 further includes at least one of the online service identity, a time that the ticket is
19 generated, a second time parameter indicative of when the ticket expires, and a
20 randomly generated session key to be used in communication between the game
21 console and the online service.
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2 **10. (original)** A method as recited in claim 6, wherein the returning
3 further comprises sending an attached message along with the ticket from the
4 ticket issuing entity to the game console, the message containing a randomly
5 generated session key to be used in communication between the game console and
6 the online service.

7
8 **11. (original)** A method as recited in claim 10, wherein the attached
9 session message is encrypted with a key associated with the game console.

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11 **12. (original)** A method as recited in claim 10, wherein the passing
12 comprises sending a second message with a current time encrypted with the
13 session key.

14
15 **13. (original)** A method as recited in claim 12, wherein the ticket
16 further includes a randomly generated session key and the verifying, at the online
17 service, further comprises:

18 decrypting the ticket using the key associated with the online service to
19 recover the session key;

20 decrypting the second message with the session key to recover the current
21 time; and

22 authenticating the multiple users and the game console in the event that the
23 recovered current time is within an acceptable time window from the current time.
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14. (original) A method as recited in claim 6, further comprising:
sending a reply from the online service to the game console; and
verifying, at the game console, an authenticity of the reply.

15. (original) One or more computer-readable media comprising
computer-executable instructions that, when executed, perform the method as
recited in claim 6.

16. (currently amended) A method comprising:
creating, at a game console, multiple validated user identities (U_1, H_1) ,
 (U_2, H_2) , ..., (U_U, H_U) identifying multiple users of the game console composed of
user identities U_1, U_2, \dots, U_U and associated values H_1, H_2, \dots, H_U derived from
the user's key;

forming, at the game console, a request containing an identity string that
includes a game console identity X , a game title identity G , the multiple validated
user identities, and an identity A of an online service, as follows:

$$\text{Request} = [X, G, A, (U_1, H_1), \dots, (U_U, H_U)];$$

submitting the request from the game console to a ticket issuing entity;
creating, at the ticket issuing entity, a ticket containing the identity string
and a session key K_{XA} encrypted with a key K_A associated with the online service,
as follows:

$$\text{Ticket} = E_{K_A}[K_{XA}, X, G, A, U_1, U_2, U_3, U_4];$$

1 sending the ticket along with the session key K_{XA} from the ticket issuing
2 entity to the game console;

3 passing the ticket from the game console to the online service along with
4 data encrypted using the session key K_{XA} ; and

5 verifying the ticket at the online service by decrypting the ticket using the
6 online service key K_A , extracting the session key K_{XA} from the decrypted ticket,
7 and decrypting the data from the game console using the session key K_{XA} .

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9 **17. (original)** A method as recited in claim 16, wherein the creating
10 comprises computing cryptographic hash digests of user keys associated with the
11 multiple users, each user identity being a combination of the user identity and the
12 cryptographic hash of an associated user key.

13
14 **18. (original)** A method as recited in claim 16, wherein the creating
15 comprises encrypting a time value using keys associated with the multiple users,
16 each user identity being a combination of the user identity and the current time
17 encrypted with the user key.

18
19 **19. (original)** A method as recited in claim 16, wherein the request
20 further includes an identity of the game console.

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22 **20. (original)** A method as recited in claim 16, wherein the ticket
23 further includes at least one of a time that the ticket is generated and a second time
24 parameter indicative of when the ticket expires.
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1 **21. (original)** A method as recited in claim 16, further comprising
2 encrypting the session key K_{XA} with a key associated with the game console
3 before said sending of the session key to the game console.

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5 **22. (original)** A method as recited in claim 16, wherein the data
6 comprises a time value representative of a current time.

7
8 **23. (original)** A method as recited in claim 16, wherein the data
9 comprises a time value representative of a current time, and the verifying
10 comprises authenticating the game console and the multiple users in an event that
11 the time value received from the game console is within an acceptable time
12 window from a current time.

13
14 **24. (original)** A method as recited in claim 23, further comprising:
15 sending a reply from the online service to the game console, the reply
16 containing the time value encrypted using the session key K_{XA} ; and
17 verifying, at the game console, an authenticity of the online service in an
18 event that the game console successfully decrypts the time value using the session
19 key K_{XA} , and the time value returned matches the time value sent to the online
20 service.

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22 **25. (original)** One or more computer-readable media comprising
23 computer-executable instructions that, when executed, perform the method as
24 recited in claim 16.
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2 **26. (currently amended)** A method for operating a game console,
3 comprising:

4 submitting a request to a ticket issuing entity, the request containing
5 multiple user identities identifying multiple users of the game console, a game
6 title, and an identity of an online service; and

7 receiving a single ticket from the ticket issuing entity that can be used to
8 authenticate the multiple user identities and the game title to the online service.

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10 **27. (previously presented)** A method as recited in claim 26, wherein
11 the request further includes an identity of the game console.

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13 **28. (original)** A method as recited in claim 26, further comprising
14 cryptographically deriving the user identities from information associated with the
15 users.

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17 **29. (original)** A method as recited in claim 26, wherein the ticket
18 includes at least one of (1) the multiple user identities, (2) the identity of the online
19 service, (3) an identity of the game console, (4) an identity of a game title being
20 played in the game console, (5) a time that the ticket is generated, (6) a second
21 time parameter indicative of when the ticket expires, and (7) a randomly generated
22 session key to be used in communication between the game console and the online
23 service.
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1 **30. (original)** A method as recited in claim 26, further comprising
2 sending the ticket to the online service.

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4 **31. (original)** One or more computer-readable media comprising
5 computer-executable instructions that, when executed, perform the method as
6 recited in claim 26.

7
8 **32. (currently amended)** A method for operating a game console,
9 comprising:

10 submitting a request to a ticket issuing entity, the request containing
11 multiple user identities identifying multiple users of the game console and an
12 identity of the game console; and

13 receiving a single ticket from the ticket issuing entity that can be used to
14 authenticate the multiple user identities and the game console.

15
16 **33. (original)** A method for operating a game console, comprising:
17 creating a request with multiple user identities of multiple users who are
18 playing on a game console; and

19 submitting the request to a third party.

20
21 **34. (original)** A method as recited in claim 33, wherein the request
22 includes at least one of an identity of an online service, an identity of the game
23 console, an identity of a game title being played in the game console.

1 **35. (currently amended)** A method as recited in claim 33, further
2 comprising receiving a single ticket from the ticket issuing entity that can be used
3 to authenticate the multiple user identities to another entity.

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5 **36. (original)** One or more computer-readable media comprising
6 computer-executable instructions that, when executed, perform the method as
7 recited in claim 33.

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9 **37. (previously presented)** A method comprising:
10 receiving a request from a game console, the request containing multiple
11 user identities of multiple users who are playing at the game console, a game
12 console identity, a game title identity, and an identity of a third party;
13 generating a single ticket to be used to authenticate the multiple user
14 identities, the game console identity, and the game title identity to the third party;
15 and
16 returning the ticket to the game console.

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18 **38. (canceled)**

1 **39. (original)** A method as recited in claim 37, wherein the ticket
2 includes at least one of (1) the multiple user identities, (2) the identity of the third
3 party, (3) an identity of the game console, (4) an identity of a game title being
4 played in the game console, (5) a time that the ticket is generated, (6) a second
5 time parameter indicative of when the ticket expires, and (7) a randomly generated
6 session key to be used in communication between the game console and the third
7 party.

8
9 **40. (original)** A method as recited in claim 37, further comprising
10 encrypting the ticket with a key associated with the third party prior to said
11 returning the ticket.

12
13 **41. (original)** A method as recited in claim 37, further comprising:
14 generating a session key to be used in communication between the game
15 console and the third party; and
16 sending the session key to the game console.

17
18 **42. (original)** One or more computer-readable media comprising
19 computer-executable instructions that, when executed, perform the method as
20 recited in claim 37.

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22 **43-44. (canceled)**
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1 **45. (previously presented)** A method for manufacturing a game
2 console, comprising:

3 constructing a game console with associated authentication information;
4 and

5 storing the authentication information in a database to be used for
6 authenticating the game console, a game title executing on the game console, and
7 multiple users of the game console after the game console is released from
8 manufacturing.

9
10 **46. (original)** A method as recited in claim 45, wherein the
11 authentication information comprises at least one of a hard disk drive ID, a CPU
12 ID, a first value derived from the hard disk ID, a second value derived from the
13 CPU ID, and a third value derived from a combination of the hard disk drive ID
14 and the CPU ID.

15
16 **47. (original)** A method as recited in claim 45, wherein the
17 authentication information comprises one or more serial numbers of hardware
18 components in the game console.

19
20 **48. (original)** A method as recited in claim 45, wherein the
21 authentication information comprises a random key generated at manufacturing
22 time.

1 **49. (original)** A method as recited in claim 45, further comprising
2 securely transferring the database to an authentication site for access by an
3 authentication server.

4
5 **50. (original)** A method as recited in claim 45, further comprising
6 creating, at the authentication server, account names/passwords for the game
7 consoles identified in the database.

8
9 **51. (original)** One or more computer-readable media comprising
10 computer-executable instructions that, when executed, perform the method as
11 recited in claim 45.

12
13 **52. (previously presented)** A method for validating an authenticity
14 of a game console and multiple users of the game console, comprising:

15 receiving, from the game console, authentication information that is
16 associated with the game console at a time of manufacturing; and

17 evaluating the authentication information to determine whether the game
18 console is valid.

19
20 **53. (currently amended)** A method as recited in claim 52, wherein
21 the authentication information comprises at least one of a hard disk drive ID, a
22 CPU ID, a first value derived from the hard disk drive ID, a second value derived
23 from the CPU ID, and a third value derived from a combination of the hard disk
24 drive ID and the CPU ID.
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2 **54. (original)** A method as recited in claim 52, wherein the
3 evaluating comprises using a database of authentication information for game
4 consoles to determine whether the authentication is valid.

5
6 **55. (original)** A method as recited in claim 52, wherein the
7 evaluating comprises ascertaining whether an account for the game console
8 associated with the authentication information has already been established.

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10 **56. (original)** A method as recited in claim 52, further comprising, in
11 an event that the game console is valid, generating an identity and a cryptographic
12 key for the game console.

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14 **57. (original)** A method as recited in claim 52, further comprising, in
15 an event that the game console is valid, creating an account for the game console.

16
17 **58. (original)** One or more computer-readable media comprising
18 computer-executable instructions that, when executed, perform the method as
19 recited in claim 52.

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21 **59-66. (canceled)**
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1 **67. (currently amended)** A single gaming ticket data structure
2 embodied on a computer readable media, comprising multiple user identities of
3 users playing at a game console, encrypted using a key associated with a third
4 party entity to which the multiple users are to be authenticated.

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6 **68. (currently amended)** A single gaming ticket data structure
7 embodied on a computer readable media, comprising multiple user identities of
8 users playing at a game console and an identity of the game console, encrypted
9 using a key associated with a third party entity to which the multiple users are to
10 be authenticated.

11
12 **69. (previously presented)** A game console, comprising:
13 a memory; and
14 a processor coupled to the memory, the processor being configured to
15 obtain authentication of multiple users of the game console together in a single
16 request/reply exchange with an authentication entity, wherein the single
17 request/reply exchange identifies the multiple users, the game console, a game
18 title, and an online service.

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20 **70. (canceled)**

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1 **71. (currently amended)** A game console as recited in claim 70
2 69, wherein the memory comprises a hard disk drive with an associated hard
3 disk ID and the processor has an associated processor ID, and the processor is
4 configured to submit at least one of the hard disk ID, the CPU ID, and a value
5 derived from the CPU ID to a third party as part of a process to obtain the game
6 console identity.

7
8 **72. (currently amended)** A system, comprising:
9 a ticketing issuing entity;
10 a game console configured to submit a request to the ticket issuing entity,
11 the request containing multiple user identities identifying multiple users of the
12 game console, a game console identity, a game title identity, and an identity of an
13 online service; and
14 the ticket issuing entity being configured to generate a single ticket that can
15 be used by the game console to authenticate the multiple user identities, the game
16 console identity, and the game title identity to the online service.
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1 **73. (currently amended)** A system, comprising:

2 a ticketing issuing entity;

3 a game console configured to submit a request to the ticket issuing entity,
4 the request containing multiple user identities identifying multiple users of the
5 game console, a game console identity, and a game title identity; and

6 the ticket issuing entity being configured to generate a single ticket that can
7 be used by the game console to authenticate the multiple user identities, the game
8 console identity, and the game title identity to a third party.

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10 **74. (canceled)**